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AUTHOR West, Daniel J.; Watson, Diane E.
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ABSTRACT

This paper proposes an alternative approach to the traditional education paradigm that has prepared students for the old health care environment. In a changing health care environment, problem based learning (PBL) is achieving popularity primarily because educational outcomes parallel the skills and abilities desired of future clinicians and administrators. It is proposed that PBL strategies be woven into a core curriculum to meet accreditation criteria and simultaneously increase students' self-directed learning. The PBL model, such as that adopted by the graduate program in health administration at the University of Scranton (Pennsylvania), is an androgogical model that uses an understanding of the characteristics of the learner to: (1) construct opportunities for interactive and cooperative learning; (2) develop specific skills and competencies; and (3) create a realistic context within which new skills and abilities can be developed, implemented, reinforced, and refined. An action-oriented approach with feedback and greater student involvement leads to a self-directed program. This focus on the learner enables faculty, with a well designed curriculum, to foster life long learning and self-development while preparing students for a changing environment. (JLS)

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ED 400 242

Using Problem-Based Learning and Educational Reengineering to Improve Outcomes

Daniel J. West
Diane E. Watson

Random, discontinuous change permeates the international business community and health sectors of the economy. Success in a changing environment requires innovation in industry, and new educational initiatives to prepare professionals to fit the context of future practice. Change creates uncertainty and opportunities. While most organizations, institutions and individuals are capable of visualizing change, few have the ability to create strategies for success in new environments. Educational programs must prepare themselves, and their students to meet this challenge. This paper will propose a change to the traditional educational paradigm that prepared students for the old health care environment; and stress that new paradigms are required to prepare successful future professionals. Problem-based learning strategies can be intricately interwoven into a complex core curriculum to meet accreditation criterion while at the same time increasing self-directed learning with students. Educational initiatives that have been implemented within the Department of Health Administration and Human Resources, Graduate MHA Program at the University of Scranton in Pennsylvania will be described.

Daniel J. West Ph.D., F.A.C.H.E., F.A.C.M.P.E. is Associate Professor and Director of the Graduate Health Administration Program, University of Scranton, PA USA 18510

Diane E. Watson, MBA, OTR/L, OT(c) is a Clinical Education Coordinator and Instructor in the Department of Occupational Therapy, University of Scranton.

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Achieving Desirable Health Outcomes

The health care industry is rapidly changing. Efforts to transform health services around the world focus on improving health status and economic performance. Restructured systems attempt to guarantee consumer choice, service access, quality improvement and cost containment (Cleland, 1994; Preker, 1994; Rice, 1994).

The health care industry in the United States is in an evolutionary transition process. The current institutional based, medical service model focuses on improving quality by creating specialized segmented services. The industry is rapidly moving towards a competitive market model providing comprehensive, community based, and customer driven integrated services with a focus on employing professionals that strive for continuous quality and efficiency improvements. Public policy and business strategy are directed toward capitated spending to control health care production and consumption.

The market-oriented strategies driving American reform include: (a) decentralizing management control and resource allocation decisions, (b) implementing policy to foster liberalization, (c) increasing competitiveness among providers, and (d) privatizing specific services and systems. The determinants of successful reform implementation include policy formation and management, system structure and integration, matching supply and demand through management skill and competency, and educational services that create knowledge workers and effective managers. Curriculum innovations are required to prepare and support health care practitioners as they meet the challenges of contemporary practice.

While the Accrediting Commission of Education for Health Services Administration (ACEHSA) assists educators and program directors in defining the knowledge based educational outcomes required for graduates, health administrators and practitioners will require new skills and abilities to ensure their vitality and longevity in this competitive environment. Dr. Steve Shortell (1995) from Northeastern University J.L. Kellogg Graduate School of Management discusses Type I, Type II and Type III problems facing managers and leaders in health care. He contends that the Type III problems are the most difficult to solve because "we do not know, what we do not know". For this reason, educators must prepare professionals for new horizons which require an armamentarium of tools, skills and abilities.

Improving Educational Outcomes

Professional education programs and courses in the Americas must prepare self-directed, life long learners who strive to identify and solve problems, and succeed in diverse and evolving environments. Successful "entrepreneurial" performers in the new health care environment will (a) continually self-monitor and direct their learning to remain current, (b) identify and resolve problems to improve quality and cost outcomes, (c) work effectively in teams to support comprehensive service delivery, (d) efficiently manage complex and expanding information and technology, and (e) actively participate in a diverse work force. Figure 1 illustrates how changes in the health care practice environment necessitate educational re-engineering (Watson & West,

1995). Contemporary leaders in health care need visionary focus in an environment that promises uncertainty, and the creativity to address new problems in unforeseen contexts; while retaining the flexibility to reshape contingency plans, and the willingness to assume personal responsibility for outcomes. Effective interpersonal and human resource management will be vital to the implementation of policy or corporate strategy. It is these personal characteristics, skills and abilities that must be fostered with new educational initiatives.

Traditional didactic pedagogy has been criticized for its inadequate portrayal of the context of major health issues and problems. Lecture based instruction is adequate for knowledge acquisition, but skills and abilities must be practiced in the context that closely approximates reality. While the development of a professions' and individuals' body of knowledge is required to improve service effectiveness, health administrators and practitioners will be judged and evaluated based on knowledgeable efficient performance outcomes.

The Problem-Based Learning Strategy

Problem-based learning (PBL) is an androgogical educational model that has been used successfully in undergraduate, graduate and continuing education programs in law, business and medicine. Students are empowered to self-direct their education to solve practice-related problems in an educational process that is supportive and collaborative. Learning becomes a shared process where both the students and educators contribute knowledge, perspectives, feelings and interests. Problem analysis and resolution fosters cooperative, critical and reflective learning.

The essential components of PBL require an understanding of the important characteristics of the learner to (a) construct opportunities for interactive and cooperative learning, (b) develop specific skills and competencies, and (c) create a realistic context within which new skills and abilities can be developed, implemented, reinforced and refined. It is these essential components that are the key characteristics of the new paradigm in professional education.

PBL is achieving popularity in the health professions, primarily because educational outcomes parallel the skills and abilities desired of future clinicians and administrators. By redesigning educational pathways to prepare professionals to fit the context of their practice, university administrators and curriculum planners incorporate the same strategies popularized in industry: self-managed work teams, continuous quality improvement, strategic community alliances, cost containment, benchmarking, ethical analysis, cultural diversity, marketing savvy, and a strong commitment to accommodating change. It is these curriculum and educational initiatives that will prepare and support health care practitioners as they meet the challenges of contemporary practice. PBL typically uses vignettes and case based problems from industry to create a realistic context for the development of professional behaviors. The University of Scranton's MHA Program has applied this teaching and learning approach to the entire graduate educational pathway.

Specific Experiential Learning Strategies

The MHA Program at the University of Scranton has adopted the overall University mission, but has also developed a specific program mission. This mission focuses on preparing and developing health care leaders and managers for middle and senior management positions in the health care industry. Based on traditional Jesuit values, a strong emphasis is placed on assisting professionals enrolled in the program to engage in a course of self-directed professional evaluation and assessment. The MHA program is based on:

1) a clearly developed mission, reflecting appropriate vision for health care managers and leaders, grounded in traditional Jesuit christianity;
2) well articulated goals and objectives with a focus on measurable outcomes;
3) curriculum design and course content which will achieve knowledge based educational outcomes;
4) a process within the curriculum, facilitated by faculty, that encourages a high degree of learner involvement and self-directed study;
5) a learning context that enables current and future practitioners to acquire and practice skills and abilities;
6) a cultural climate and milieu that fosters positive, self-directed growth, grounded in program values, philosophy with a strong professional code of ethics.

The curriculum is based on the requirements of ACEHSA, and has evolved to include basic knowledge, understanding, skills and values relevant to health services administration in eight areas: health status, health and illness, health service utilization; organization, financing and delivery; ethics, ethical analysis and values; positioning and managing organizations; leadership and interpersonal skill development; managing human, capital and information resources; assessing organizational performance and quality of service; and economic, policy and quantitative analysis.

Within the core curriculum, the mission and goal statements enable the problem-based learning educational strategy to be intricately woven into the MHA program. The intent is to submerge students in a self-directed program (Figure 2) for professional development to:

1. Enhance student **awareness** of life-long learning through developing professional self and their potential role(s) within the environment of health care service delivery;
2. Develop an **understanding** of the environment of health service delivery and reform options;
3. Encourage **exploration** and evaluation of alternative career paths and service reform options;
4. **action** implementation orientation;
5. formative and summative **feedback** for evaluation and continuous quality improvement.

Awareness - Defining the Issues

Orientation interviews are conducted to determine if the candidate meets the admission requirements of the University and the Program, and to engage the individual in a dialogue to identify their rationale and commitment to pursue graduate studies. This interview marks the beginning of a process by which faculty and students identify the motivational parameters essential for self-directed educational outcomes. In essence, the interview: (a) provides an opportunity to understand the learners motivations and ambitions, (b) require the student to assume personal responsibility for managing professional growth, and (c) provides concrete examples of prior behaviors that demonstrate a commitment to self-directed learning.

Once accepted into the Program, students refine their understanding of the Program's mission, goals and objectives; the underlying value system of the faculty and curriculum; and the outcome measures that will be utilized to provide appropriate feedback in later stages and phases of learning. Proper annunciation of program values, fundamentals of Jesuit education, and a rudimentary discussion of a professional code of ethics enhances the learners awareness of the context of the Program and their graduate learning environment.

Students who work with the health care industry are able to structure the learning process and integrate knowledge and skills into their work environment. Employment and learning co-exist, and the opportunities for synergies can be designed and formatted into the educational plan at this early stage of the Program. All students are required to establish external mentorships and participate in community service. Students who do not work or have experience within health care can use these opportunities, as well as elective fieldwork, to gain access to industry opportunities. These opportunities, however, must be planned to fit the professional development educational mission identified by each student.

Understanding - Collecting the Data

Health care administrators must continually develop and implement courses of action that are congruent with personal and professional value systems. Graduate health administration educational programs must move beyond core curriculum requirements to prepare students to make these important decisions. Personal and professional development is fostered through introspection and reflection. This examination process is essential. The *Professional Assessment and Development Strategy* (PADS) instrument was designed to promote self assessment of (a) personal and physical health; (b) social and interpersonal skills; (c) spiritual development; (d) professional and educational development; (e) skills in the area of time and stress management, and (f) management of leisure time and extra-curriculum activities (West, 1992). The MHA Program facilitates this personal introspection and reflection by assigning individuals to "peer counselors" who are graduate students in the
Department of Counseling and Human Services; and "career planners" in the Counseling and Career Development Resource Centers at the University.

The student is assisted in creating a personal mission which highly correlates with their vision of the future. This self-directed personal and professional mission and strategic action plan lay the foundation for student career benchmarking. In essence, the students begins to create

a professional portfolio which is tailored to meet their work requirements, academic activities, and extra-curricular plans. This process ensures that students make wise and informed decisions regarding elective courses and fieldwork activities.

Exploration - Evaluating Alternatives

Outside of the classroom students must establish external mentorships, community service and student memberships in nationally recognized organizations and associations. The University has an active Student Chapter of the American College of Health Care Executives (ACHE) which provides informal networking opportunities and co-sponsors numerous continuing education forums annually. Students participate in regional ACHE activities, and interact with professional audiences to establish potential professional and employment relationships.

Internal mentorship facilitates the implementation of students' self-directed educational activities. For example, students are strongly encouraged to pursue scholarly writing, research and publication. Scholarly activities are offered as optional exercises to traditional course assignments were appropriate. These activities either fit or assist in the development of students' personal and professional mission statement. During the past 18 months 15 students have elected to write professional journals articles with faculty. This effort has resulted in an 85% publication rate in referred journals for those articles which have been co-authored between students and faculty. Self-directed study allows the learner to generate personal energy which emerges from assuming ownership of personally designed activities.

The development of a strong self-directed learning plan, coupled with personal energy and an armamentarium of tools and skills, enables the learner to move into a more action oriented phase of PBL development.

Action - Implementing Choices

The MHA Program creates a realistic context for learning and the professional development through fieldwork experiences (in the form of externships, internships, administrative residencies), group assignments and projects, graduate assistantships, post graduate fellowships, class debates, selected journal reading to facilitate the resolution of work related issues, external and internal mentors.

Within the 45 credit graduate curriculum, students must complete 39 core credit courses to meet the eight ACEHSA curriculum content areas. Students select 6 credits of elective courses for personal and professional development. Course work is offered in time management, professional skills training, negotiation, conflict management, medical practice management, long term care administration, ambulatory care administration, and hospital administration. The University offers these one credit elective courses to alumni for continuing education. The classroom interaction between alumni and current students fosters role modeling, professional identity, and networking; and reinforces the need for life long learning.

Selective use of case base problems, or the case method of instruction, is used to provide context and promote integration of learning. "Case studies of unusually visionary yet well-

grounded exemplars of good practice may present the ideal middle ground between the unfeddered fantasies of the dreamers and the unimaginative practices of the uninspired" (Shulman, 1992, p. 8). The final capstone course requires students to resolve a complex case by interacting with the professional community. Students may consult with hospitals, long term care facilities, medical group practices, bankers, accountants, attorneys and other professional disciplines. Throughout the program, students are required to access, collect, and evaluate information from the sources they will utilize as professionals: (a) library media, (b) media resources, (c) university resources, (d) product suppliers, (e) internal and external mentors, (f) network of colleagues, (g) professional organizations and societies.

Interactive learning, class debates, reaction critiques, group assignments, class discussion and use of external lecturers facilitates a higher degree of interaction between the applied environment with academia. The self learning requirement of 24 hours of community service has proven to be a PBL activity allowing students to gain access to board and organizational membership in the community.

Review - Evaluating the Outcome

Students are continuously involved in continuous quality improvement. All phases of graduate studies requires assessment and evaluation by the learner of faculty, curriculum and the cultural milieu of the Department and Program. Evaluations from the alumni and the health care provider community provides additional feedback. The Program uses these results to adjust course content and organized learning activities to ensure that curriculum improvement and to obtain quality outcomes. Continuous program evaluation reinforces the need for students to participate in benchmarking, quality assurance and improvement.

Towards the end of the Program, students reassess their personal and professional development strategies. Graduates serve as external consultants, planning committee members, mentors, preceptors, and guest lecturers. They are introduced to the MHA Alumni Association, and are encouraged to pursue advancement with the ACHE.

Planning for the Future

Academic problem based learning creates and reinforces the momentum of continuous self-improvement to develop and direct a strategically designed health care career in the context of a transforming health care environment. Interactive, self-directed educators play a important role in developing, implementing, reinforcing, and refining the professional behaviors required to maintain viability and longevity in the practice environment.

Educational initiatives that facilitate strong alliances with appropriate businesses create realistic learning environments for students. Educational alliances enable learners to develop and utilize tools, skills and abilities. PBL learning necessitates that faculty appreciate and maintain involvement with applied settings. One of the most important deterrents to using PBL is a faculty that is in a academic curve of "professional skill decay". A curriculum with appropriate

strategies to incorporate visionary thinking, mission development and value analysis strengthens academic development for students.

The true focus of all educational endeavors is the student learner. Such a customer driven focus enables faculty, with a well designed curriculum, to foster life long learning and self-development. PBL models ensure that professionals have the knowledge, skills and abilities to engage in introspection and reflection to ensure career longevity. PBL learning models necessitate that faculty modify and amend the curriculum in a rapid fashion to correlate with a dynamically changing external environment. Such activities encourage interdepartmental and interdisciplinary cultural milieus which create positive energies for the faculty, student and business community.

As the "managed care" health care environment transforms, higher education will engage in "managed education" to permit consumer choice and access to programs that develop "knowledge workers". Higher education will embark in a process of competition and consolidation, and programs that focus on cost, quality, access, and customer satisfaction will foster high quality graduate education.

As educators, program directors, deans and chairpersons, we have critical choices that must be made to create appropriate and well defined graduate education. As leaders of major teaching institutions, we must move away from traditional didactic models and implement educational initiatives to cultivate a learning environment that (a) fosters self-directed life long learning; (b) reinforces healthy interactions between academia and the applied world; (c) ensures that faculty maintain an appropriate working knowledge of the requirements of industry; and (d) demands academic efficiency and effectiveness.

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Figure 1
How the Shift in the Health Care Practice Environment Impacts Professional Preparation

	Old Paradigm		New Paradigm
Practice Environment	Institution based	→	Community ambulatory services
	Focus on the individual	→	Population perspective
	Medical model	→	Consumer focused
	Disease orientation	→	Focus on wellness and prevention
	Individual providers	→	Team providers
	Specialized care	→	Comprehensive services
	Quality assurance (process)	→	Quality improvement (outcome)
	Professional autonomy	→	Governed services
	Predictable change	→	Discontinuous random change
	↕		↕
Professional Preparation	Individual centered	→	Group centered learning
	Lecture and listen	→	Inquiry and research
	Centrality of the text book	→	Multimedia resource access
	Focus on content	→	Focus on process
	Rote memorization	→	Reflective practitioner
	Structure learning	→	Trust the learner
	Passive learning	→	Active learning
	Teacher directed	→	Learner directs and evaluates self
	Episodic Learning	→	Life long learning

Figure 2

PBL Education Model
Graduate Health Administration

PBL Developmental Phases	PBL Educational Strategies
Awareness	Interactive Orientation Employment and Learning Co-Exist Internal Mentor/Advisor Descriptive Materials Program Outcomes and Assessment Clear Program Requirements
Understanding	PADS Instrument - Benchmarking Introspection and Reflection Peer Counseling Process Professional Portfolio Personal Mission and Value Analysis Colleague Networking
Exploration	External Mentorship University and Community Resources Scholarly Writing Armamentarium of Tools and Skills Fieldwork Options Extracurricular Plan
Action	Curriculum Design Educational Plan Career Plan and Strategy Capstone Course Computer/Multimedia Literacy Community Service
Evaluation	Re-engineer PADS MHA Alumni ACHE Involvement Serve as External Mentor and Preceptors Guest Lecture Follow-up Assessment and Evaluation

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